1975 MICHIGAN FOREST PEST CONDITIONS

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INTRODUCTION

This is a summary of the forest pest conditions for the State of Michigan during 1975. This report has been divided into two parts and will deal with the Lower Peninsula and Upper Peninsula separately.

Information for this summary was obtained primarily from three sources: 1) personal observations and surveys; 2) monthly pest reports submitted by DNR Area Foresters; 3) contacts with pest specialists from other agencies.

LOWER PENINSULA

INSECTS

JACK PINE BUDWORM (Choristoneura pinus)

Populations dropped dramatically from last year's outbreak levels. An aerial survey conducted during 1975 in cooperation with the U.S. Forest Service, State and Private Forestry failed to discover any areas of heavy defoliation. The only defoliation reported was 20,000 acres of light to moderate defoliation scattered over state forest land in a six county area, including Lake, Clare, Roscommon, Ogemaw, Presque Isle, and Cheboygan Counties.

Because of the mortality sustained from last year's heavy defoliation (estimated to be 53,125 cords on the Thunder Bay and Oscoda State Forests alone) a survey was conducted in an attempt to measure the impact of heavy defoliation by the budworm. Permanent plots were established to monitor mortality and growth loss over a five year period. Hopefully, information derived from this survey will help to reduce the impact of this insect by the use of silvicultural and management practices.

SPRUCE BUDWORM (Choristoneura fumiferana)

Scattered outbreaks of this insect continued at about the same levels as 1974. Heavy defoliation of spruce and fir was reported on about 6,850 acres in Cheboygan, Presque Isle, Montmorency and Alpena Counties. Mortality on these areas was estimated to be 7,120 cords. Salvage has been difficult because of market conditions, except in the Alpena area where some salvage has been possible.

Serious defoliation, as a result of last year's influx of spruce budworm moths into southern Michigan, failed to materialize during 1975. A few isolated cases of defoliation on ornamentals and Christmas trees were reported.

ARBORVITAE LEAF MINER (Argyresthis thuiella)

Populations of this insect exploded in the northern Lower Peninsula during 1975. Defoliation, which was confined to only two western counties last year, was noticeable in nearly every area of the northern Lower Peninsula this year.

Defoliation was heavier on the western half of the northern Lower Peninsula with about 66,700 acres of state and private forest land being hard hit. Benzie and Grand Traverse Counties were heavily defoliated for the second year. Kalkaska, Charlevoix, and Antrim Counties were also among the heaviest defoliated areas.

In the central and eastern part of the northern Lower Peninsula, defoliation ranged from moderate to light, with approximately 64,000 acres being defoliated.

This outbreak is expected to continue next year. Some mortality of edge trees and trees on poor, dry sites is anticipated.

FOREST TENT CATERPILLAR (Malacosoma disstria)

Defoliation by this pest increased in some areas of the northern Lower Peninsula and dropped off in others. About 10,000 acres were heavily defoliated in Otsego, Montmorency and Alpena Counties.

Scattered light to moderate defoliation of state and private forest land occurred on an additional 136,000 acres in Kalkaska, Missaukee, Emmet, Cheboygan, and Presque Isle Counties.

It would appear that the potential does exist for a possible outbreak next year in the Lower Peninsula.

AN OAK LEAFROLLER (Archips semiferanus)

Numbers of this insect were down somewhat in most areas this year. However, moderate defoliation was observed on about 17,800 acres in Presque Isle, Cheboygan and Iosco Counties. Populations are expected to continue at about the same levels next year.

BLACK WALNUT SHOOT MOTHS (Acrobasis demotela and A. juglandis)

First-year findings of a cooperative research program conducted by Michigan State University, U.S. Forest Service, and Michigan DNR, indicate that there are two species of Acrobasis primarily responsible for shoot and bud injury to walnut in southern Michigan.

A. demotela tunnels into expanding shoots causing them to wilt and die, while A. juglandis feeds on expanding buds, often killing them.

Preliminary results have shown that good control can be obtained with systemic granular insecticides. This research project will continue next year.

GYPSY MOTH (Porthetria dispar)

The 1975 eradication program conducted by the Michigan Department of Agriculture, Plant Industry Division, and the U.S.D.A., Animal and Plant Health Inspection Service consisted of two different treatments.

The insecticide Sevin-4 Oil was applied to 11,840 acres in Gratiot, Isabella, Mecosta, Montcalm, and Macomb Counties.

Another method utilized on 5,120 acres in Isabella County was saturation trapping. This involved the placement of 5,760 Disparlure traps per square mile in the treated area.

In addition to the eradication program, a statewide detection trap survey was conducted. Next year's control program will be formulated after the detection survey is evaluated.

A PINE ROOT WEEVIL (Hylobius rhizophagus)

This insect was found in 10 Scotch pine plantations in eight different counties in the Lower Peninsula. Feeding by this pest on Scotch pine root systems has caused severe flagging and extensive mortality in most plantations observed.

OTHER INSECTS

The SPRING AND FALL CANKERWORM (Paleacrita vernata and Alsophila pometaria) along with the LINDEN LOOPER (Erannia tiliaria) were responsible for complete defoliation of scattered oak woodlots in Cass and Berrien Counties. Local populations of these pests were very high and caused much public concern.

Isolated infestations of the MAPLE LEAF CUTTER (Paraclemensia acerifoliella) were responsible for heavy defoliation of a few woodlots in Benzie and Manistee Counties.

Populations of the ELM LEAF BEETLE (Pyrrhalta luteola) continued at very high levels in southern Michigan. Invasion of homes by this pest was responsible for many public complaints.

The FALL WEBWORM (Hyphantria cunea) was very numerous in southern Michigan and in some areas caused the complete defoliation of black walnut.

The INTRODUCED PINE SAWFLY (Diprion similis) was reported to be a problem on about 100 acres of white pine in Lake County.

SARATOGA SPITTLEBUG (Aphrophora saratogensis) populations were up again this year. One new infestation on about 20 acres was observed in Cheboygan County where blackberry was being used as the alternate host.

The EASTERN PINE SHOOTBORER (Eucosma gloriola) is increasing in severity as a problem on Scotch pine in southern Michigan. Reported attempts at chemical control have not been successful.

DISEASES

SCLERODERRIS CANKER (Scleroderris lagerbergii)

During 1975 red pine planting stock was shipped from Toumey Nursery to the Lower Peninsula for planting on the Kalkaska State Forest and Huron-Manistee National Forest. Because of the past incidence of scleroderris in Toumey Nursery, a cooperative survey was conducted by Forestry Division and U. S. Forest Service, State and Private Forestry to ensure that the disease had not been brought in on the stock.

No scleroderris was detected during the survey. A correlation between late planting and a failure to break dormancy was noted.

OAK WILT (Ceratocystis fagacearum)

For the second straight year, new infections continued to be located in the northern Lower Peninsula.

New locations were found in Lake and Clare Counties. This was the first find in Clare County.

Whether this indicates a northern spread of the disease, or just an increase in surveillance, has not yet been determined.

DUTCH ELM DISEASE (Certocystis ulmi)

This disease continued to take its toll in areas of Lower Peninsula where elms still exist.

Cities with good sanitation and root graft control programs have been able to reduce losses to very low levels.

ASPEN SHOOT BLIGHT (Venturia sp.)

In general, incidence of this disease declined from last year. Heavy infection did occur again in some localized areas of the Lower Peninsula.

ANTHRACNOSE (Gnomonia sp.)

Anthracnose was commonly reported on sycamore, oak, and maple in southern Michigan.

MAPLE DECLINE

Reports of this malady continued to come in this year. Trees most often affected are city street trees and trees along rural roads.

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UPPER PENINSULA

INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana)

This pest continued to be the most serious insect problem in the Upper Peninsula during 1975. Heavy defoliation of spruce and fir was reported on about 54,350 acres of state forest land in Luce, Chippewa, and Mackinac Counties. Estimated mortality in Chippewa and Luce Counties was 105,600 cords. It may be possible to salvage about 25% of this mortality. Heavy defoliation was also reported on private forest land in Gogebic County. In addition, there was approximately 35,000 acres of light to moderate defoliation reported on state land in Menominee and Mackinac Counties.

In general, it appears that the infestation in the eastern Upper Peninsula is remaining about the same or decreasing because of host depletion, while the infestation in the western Upper Peninsula is increasing. The outbreak is expected to continue and expand in those areas where sufficient quantities of mature spruce and fir still remain.

Jack Pine Budworm (Choristoneura pini)

Populations remained at endemic levels with only one report of defoliation received from Mackinac County where about 15,000 acres of jack pine suffered light defoliation.

JACK PINE SAWFLY (Neodiprion pratti banksianae)

Generally, numbers of this insect continued to decline from the high levels of a few years ago. Moderate defoliation was reported on about 5,000 acres of jack pine on the Lake Superior State Forest and on several sections in Schoolcraft County.

FOREST TENT CATERPILLAR (Malacosoma disstria)

Outbreaks of this insect occurred both on the western and eastern ends of the Upper Peninsula. Approximately 50,000 acres of federal, state and private land was heavily defoliated in Ontonagon and Gogebic Counties, while about 6,400 acres of private land was heavily defoliated in Chippewa County.

Between these two areas of heavy defoliation, scattered light to moderate defoliation was reported in Alger, Luce, and Mackinac Counties.

It is quite probable that these outbreaks will continue and expand in size next year.

BIRCH LEAF MINER (Fenusa pusilla)

Leaf miner populations were up this year from the already high levels of the last several years.

Heavy defoliation of birch was reported throughout Marquette, Mackinac, Dickinson, and parts of Iron County. Moderate defoliation was also reported in Iron and Gogebic Counties.

LARCH SAWFLY (Pristiphora erichsonii)

Increasing numbers of sawfly and heavy defoliation of tamarack were reported in Iron, Gogebic and the northern half of Dickinson Counties. Light defoliation was reported in the southern half of Dickinson County.

ASPEN BLOTCH MINER (Lithocolletis tremuloidiella)

This insect was responsible for widespread heavy defoliation of aspen in Houghton and Ontonagon Counties and the southern half of Dickinson County.

REDHEADED PINE SAWFLY (Neodiprion Lecontei)

This pest appears to be on the increase in Chippewa County. Light to heavy defoliation was reported on at least 200 acres of private red pine plantations. Trees affected were four to six feet in height, and up to six years old.

DISEASES

DUTCH ELM DISEASE (Ceratocystus ulmi)

Dutch elm disease continued its rapid spread throughout the Upper Peninsula. This disease has now been found in every Upper Peninsula County.

Losses were reported to be increasing rapidly in Mackinac, Dickinson, Iron, and Gogebic Counties. Heavy losses are expected next year in Baraga and Houghton Counties.

All merchantable elm is being cut where possible and elm is being discriminated against in TSI programs.

SCLERODERRI CANKER (Scleroderris lagerbergii)

New infections were reported on about 200 acres of young red pine plantations in Luce County. This outbreak was not expected because there had been no previously known source of inoculum in the area.

A cooperative survey was conducted this year with U.S. Forest Service, State and Private Forestry, to gather impact data on scleroderris. Ten year old permanent plots were remeasured to determine rate of spread and impact over this period of time. Results of the survey indicated interesting differences in impact according to site. A report on the survey results will be forthcoming.